

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION CONCERNING
TRANSMITTAL OF COPY OF INTERNATIONAL
PRELIMINARY REPORT ON PATENTABILITY
(CHAPTER I OF THE PATENT COOPERATION
TREATY)

(PCT Rule 44bis.1(c))

To:

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Hoffmann & Baron LLP
6900 Jericho Turnpike
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ETATS-UNIS D'AMERIQUE

OCT 25 2006

Date of mailing (<i>day/month/year</i>) 19 October 2006 (19.10.2006)		
Applicant's or agent's file reference 1038-12 PCT		IMPORTANT NOTICE
International application No. PCT/US2005/009383	International filing date (<i>day/month/year</i>) 22 March 2005 (22.03.2005)	
Priority date (<i>day/month/year</i>) 22 March 2004 (22.03.2004)		
Applicant RESEARCH FOUNDATION OF THE CITY UNIVERSITY OF NEW YORK et al		

The International Bureau transmits herewith a copy of the international preliminary report on patentability (Chapter I of the Patent Cooperation Treaty)

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Simin Baharlou
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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 1038-12 PCT	FOR FURTHER ACTION	See item 4 below
International application No. PCT/US2005/009383	International filing date (<i>day/month/year</i>) 22 March 2005 (22.03.2005)	Priority date (<i>day/month/year</i>) 22 March 2004 (22.03.2004)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant RESEARCH FOUNDATION OF THE CITY UNIVERSITY OF NEW YORK		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).
 2. This REPORT consists of a total of 4 sheets, including this cover sheet.
- In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">Date of issuance of this report 11 October 2006 (11.10.2006)</td> </tr> <tr> <td style="padding: 5px;">Authorized officer <div style="text-align: center; font-weight: bold; font-size: 1.2em;">Simin Baharlou</div></td> </tr> <tr> <td style="padding: 5px;">e-mail: pt09@wipo.int</td> </tr> </table>	Date of issuance of this report 11 October 2006 (11.10.2006)	Authorized officer <div style="text-align: center; font-weight: bold; font-size: 1.2em;">Simin Baharlou</div>	e-mail: pt09@wipo.int
Date of issuance of this report 11 October 2006 (11.10.2006)				
Authorized officer <div style="text-align: center; font-weight: bold; font-size: 1.2em;">Simin Baharlou</div>				
e-mail: pt09@wipo.int				

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

REC'D 04 SEP 2006

WIPO PCT

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WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:
IRVING N. FEIT
HOFFMANN & BARON, LLP
6900 JERICHO TURNPIKE
SYOSSET, NY 11791

Date of mailing
(day/month/year) **31 AUG 2006**

Applicant's or agent's file reference

1038-12 PCT

FOR FURTHER ACTION

See paragraph 2 below

International application No. PCT/US05/09383	International filing date (day/month/year) 22 March 2005 (22.03.2005)	Priority date (day/month/year) 22 March 2004 (22.03.2004)
International Patent Classification (IPC) or both national classification and IPC IPC: H01L 31/0224 (2006.01); H01L 31/0304 (2006.01) USPC: 250/214.1,214R;257/184,189,441-444,448,449,457-459		
Applicant RESEARCH FOUNDATION OF THE CITY UNIVERSITY OF NEW		

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/ US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Date of completion of this opinion 08 July 2006 (08.07.2006)	Authorized officer <i>Stephane B. Allen</i> Stephane B. Allen Telephone No. 571-272-2434
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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US05/09383

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing
- ☐ table(s) related to the sequence listing

b. format of material

- ☐ on paper
- ☐ in electronic form

c. time of filing/furnishing

- ☐ contained in the international application as filed.
- ☐ filed together with the international application in electronic form.
- ☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US05/09383

Box No. V Reasoned statement under Rule 43 *bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)

Claims 1-31 YES

Claims NONE NO

Inventive step (IS)

Claims 1-31 YES

Claims NONE NO

Industrial applicability (IA)

Claims 1-31 YES

Claims NONE NO

2. Citations and explanations:

Claims 1-31 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest an optical detector for sensing the strength of an external optical wave comprising improvements of a substrate comprising a semiconductor in superposed relationship with the electrodes; an aspect ratio as claimed wherein the local wave comprises a surface plasmon wave having a component of momentum oriented substantially perpendicular to a detector surface.